

REMARKS

Claims 10, 15 and 18 are presently pending in the application.

In reviewing again the amendment to the Specification at page 37 in Table 1, it was realized that the amended table is still not correct, particularly in the second line under the second electrode. Thus, columns 2 and 3 under the polarity of applied voltage were reversed. Accordingly, a new amendment of Table 1 at page 37 has been submitted above. This conforms the table to the way it appeared in the International Application PCT/JP00/03789, of which the present application is a § 371. A copy of page 20 of the published PCT application containing Table 1 is enclosed for the Examiner's information. From this, it can be seen that the present amendment to Table 1 conforms with Table 1 in the PCT application. Therefore, no new matter has been added, and entry of the amendment is respectfully requested.

The Examiner has objected to claim 15 because of two informalities involving typographical errors. These informalities have been corrected in the above claim amendment, and entry of the amendment and withdrawal of the objection are respectfully requested.

The Examiner has rejected claims 10 and 15 under 35 U.S.C. § 112, second paragraph, as being indefinite with respect to the identification of the electrodes recited in these claims. Claims 10 and 15 have been amended to make it clear which electrodes are being referred to. It is believed that these amendments overcome the § 112 rejection, and reconsideration and withdrawal of the rejection are respectfully requested.

Applicants are pleased to note the Examiner's withdrawal of the rejection of some of the previous claims under 35 U.S.C. § 102(b) over U.S. Patent 3,865,711 of Anderson.

However, the Examiner has rejected claims 10, 15 and 18 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent 5,944,685 of Muroki, for substantially the same reasons as set forth in the Office Action dated April 23, 2004. In addition, in paragraphs 12 and 13 at page 6 of the Office Action, the Examiner has responded to Applicants' arguments in the Remarks filed with the Amendment of October 25, 2004. In particular, the Examiner contends that the arguments with respect to the liquid containing particles covered with a protein is not persuasive

because the liquid is not a part of the device, but an intended use of the device, and the structure of the device does not change when different liquids are used. Further, the Examiner argues that Muroki moves drugs through a conductive matrix made of a gel and that gels are colloidal substances (part solid and part liquid), which allow the transport of charged particles. Finally, the Examiner argues that one electrode 4 of Muroki has a grid structure and the other electrode 2 can be a meshed metal film or a metal film with perforated patterns. The rejection of claims 10, 15 and 18, to the extent that it relates to the presently amended claims, is respectfully but strenuously traversed for the reasons set forth in the Amendment of October 25, 2004, and the additional Remarks set forth in detail below.

First, Applicants dispute the Examiner's contention that the liquid containing particles is not part of the device, but rather an intended use. Previous claims 15 and 18 stated that the device comprised at least two electrodes contacting a liquid that contains particles covered with a protein. In order for the electrodes to contact the liquid, the liquid must be present in the device. Nevertheless, the first clause of each of claims 15 and 18 has been amended to make this even clearer by stating that the device comprises at least two electrodes and a liquid that contains particles covered with a protein. The properties of the liquid and the particles are then clearly recited in claims 15 and 18 by providing that the liquid be capable of transporting the particles to at least one of the electrodes and that the at least two electrodes contact the liquid. Several of the other clauses of each of claims 15 and 18 have also been amended to make clear that the electrically insulating structural member, the particles and the microorganisms and/or blood cell components are each "in the liquid." Accordingly, Applicants respectfully request that the Examiner reconsider Applicants' arguments in the Remarks of October 25, 2004 in view of the clear recitation of the liquid as being part of the device.

In addition, claim 15 has been amended to more specifically cover embodiments wherein the electrodes oppose each other with a space therebetween, the electrodes each comprise a metal material having a different oxidation/reduction potential, and the circuit is cable of connecting the electrodes outside the liquid to generate the potential difference. These amendments are supported, for example, in the Specification at page 21, first full paragraph; page 49, main paragraph; page 51, last full paragraph to page 54, paragraph after Table 2; page 56, last line – page 57, first two full paragraphs; page 65, last two lines – page 67, last two full paragraphs;

page 72, third full paragraph; paragraph bridging pages 79-80; page 82, second full paragraph; and in the Figs. of the drawings. Accordingly, no new matter has been added, and entry of the amendments is respectfully requested.

With respect to the Examiner's argument that the device of Muroki is used to move drugs through the conductive matrix which is made of a gel, and that gels are colloidal substances that allow the transport of charged particles, Applicants submit that this observation is irrelevant to the present invention and not what is being claimed. The Examiner is of course correct that some gels allow the transport of ions to some extent. However, the particles contained in the device of the present invention, namely microorganisms and/or blood components, have a size of about one to several microns. These are much larger than the ions which are allowed to be transported in some gels. A gel transport phenomenon is commonly used, for example, in a pour plate method for enumerating bacteria using an agar gel, that is popular in microbiological experiments. In such experiments, bacteria are enumerated by visualizing the growth of the bacteria based upon limited transfer of the microorganism, such as bacteria, which barely move in the agar gel.

In contrast, the device of the present invention utilizes a liquid containing particles which can be transported to at least one of the electrodes contacted by the liquid, the movement taking place by electrophoresis in a direction of an electrode having the lower oxidation/reduction potential. Because of the liquid medium in the device of the presently claimed invention, the particles are actually allowed to travel to the electrode surfaces. This is quite different from the limited transport allowed by the gel system of Muroki. Accordingly, Muroki neither teaches nor suggests the presently claimed invention, and reconsideration and withdrawal of the rejection are respectfully requested.

Application No. 09/762,519

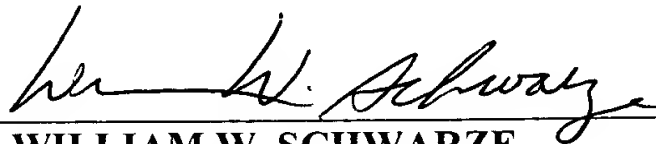
Reply to Office Action of November 16, 2004

In view of the above Amendments and Remarks, it is submitted that all of the claims fully comply with the requirements of 35 U.S.C. § 112 and patentably distinguish over the prior art of record. Reconsideration and an early Notice of Allowance are respectfully solicited.

Respectfully submitted,
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(Date)

By:



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Enclosures: Three Month Petition for Extension of Time
Copy of page 20 of the published PCT application containing Table 1